

Claims

What is Claimed is:

1. Coating agents with resin solids comprising
 - (a) 10 wt-% to 80 wt-% of a non-aromatic polyester polyol,
 - (b) 0 wt-% to 70 wt-% of at least one constituent selected from the group consisting of hydroxyl-functional binders that are different from polyester polyol (a), hydroxyl-functional reactive thinners and combinations thereof, and
 - (c) 20 wt-% to 60 wt-% of at least one cross-linking agent for the hydroxyl-functional components (a) and (b),wherein the polyester polyol (a) has a calculated molecular mass from 600 to 1400, an acid value from 0 to 30 mg KOH/g and an hydroxyl value from 250 to 600 mg KOH/g with a calculated hydroxyl functionality from 4.5 to 10, and is composed of components which comprise
 - (a1) hydroxyl components comprising 0 wt-% to 20 wt-% of at least one diol and 80 wt-% to 100 wt-% of at least one polyol having 3 to 6 hydroxyl groups,
 - (a2) carboxyl components comprising 0 wt-% to 20 wt-% of at least one monocarboxylic acid and 80 wt-% to 100 wt-% of at least one dicarboxylic acid, and optionally
 - (a3) at least one hydroxycarboxylic acid component,the sum of the percentages by weight of components (a) to (c), of components (a1) and of components (a2) being 100% in each case.
2. Coating agents according to claim 1, wherein the polyester polyol (a) comprises 30 wt-% to 60 wt-% of at least one hydroxyl component (a1), 30 wt-% to 70 wt-% of at least one carboxyl component (a2) and 0 wt-% to 10 wt-% of at least one hydroxycarboxylic acid component (a3).
3. Coating agents according to claim 1, wherein the hydroxyl component (a1) consists of at least one (cyclo)aliphatic polyol having 3 to 6 hydroxyl groups.
4. Coating agents according to claim 1, wherein the carboxyl component (a2) consists of at least one dicarboxylic acid.

5. Coating agents according to claim 1, wherein the polyester polyol (a) comprises dimer fatty acid as one of at least two dicarboxylic acids of the carboxyl component (a2) corresponding to a weight ratio from 5 wt-% to 45 wt-% of dimer fatty acid and 55 wt-% to 95 wt-% of at least one additional dicarboxylic acid.
6. Coating agents according to claim 1, wherein the cross-linking agent (c) is selected from the group consisting of aminoplastic resins, free polyisocyanates, blocked polyisocyanates, transesterification cross-linking agents or combinations thereof.
7. Coating agents according to claim 1, selected from the group consisting of aqueous coating agents and coating agents based on organic solvents.
8. A process which comprises applying a multi-layer coating on a substrate using a coating agent according to claim 1 and curing said coating.
9. A process for forming a coating layer as one coating layer of a multi-layer coating which comprises applying to a substrate a coating layer selected from the group consisting of external pigmented top coat layer and transparent clear coat layer, said coating layer being applied from the coating agent according to claim 1 and curing said coating layer.
10. A process according to claim 8, wherein the substrates are substrates selected from the group consisting of automotive bodies and body parts.